DOCUMENT RESUME

ED 071 744 PS 006 284

AUTHOR	Randazzo, Joseph D.
TITLE	A Case for Early Learning: An Invitational Environment for Children, Ages 3 - 6.
INSTITUTION	Hartford Public Schools, Conn.
PUB DATE	Jan 70
NOTE	49p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Affective Objectives; Behavioral Objectives; *Cognitive Development; Creative Teaching; *Early Childhood Education; Educational Change; *Educational Needs; Individualized Instruction; *Learning Processes; Models; Preschool Education; School Environment; Skill Development; Teacher Role; Technical Reports
IDENTIFIERS	Connecticut; *Hartford

ABSTRACT

The challenges facing education today, in particular the educational programs for children aged 3 to 6, are found to be many and varied, with the failures in urban settings pointing up the need for different and responsive learning environments. In the development of alternatives to current conditions in the schools today, the following are investigated: (1) some sources of our American tradition for the education of the young; (2) the most current investigations into the development of the intellect; and (3) what we are learning about how children really learn. The child from three to six years of age is said to need (1) independence, (2) order and sense, (3) to communicate, (4) coordinated movement, (5) to abstract, (6) to calculate, (7) repetition, (8) gregariousness, (9) concentration, (10) to satisfy curiosity, and (11) the development of a creative imagination. The need for allowing children to acquire the basic learning skills at an earlier age so that they can then engage in the "humanizing" elements of their education is stressed. The basic skills are considered to be the cognitive skills--Perceptual/Motor Development, Language Development, Concept Formation, and Problem Solving. The second major basic learning area is the affective domain, which leads to the development of social responsibility, commitment, and success identity for children. A design for a learning environment for children ages 3 to 6 years is presented. The program initiated by the Hartford (Connecticut) Public School System to meet the educational needs of young learners in that community is described. (DB)

FILMED FROM BEST AVAILABLE COPY

ED 071744

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

A CASE FOR EARLY LEARNING

An Invitational Environment For Children

Ages 3 - 6

PS 006284

By

Joseph D. Randazzo

A HARTFORD '74 WORKING PAPER

HARTFORD PUBLIC SCHOOLS
HARTFORD, CONNECTICUT

JANUARY, 1970

ED 071744

PS 006284

ABSTRACT

A CASE FOR EARLY LEARNING - an Invitational Environment for Children Ages 3 - 6:

A statement of the challenge facing the schools in seeking meaningful solutions to many of society's current problems and questionable practices; a review of recent evidence as to the needs and learning styles of young children; a description of the program initiated by the Hartford Public School System to meet the educational needs of young learners living in an urban community.

TABLE OF CONTENTS

	PAGE
THE PROBLEM	1
IN-QUESTION	3
THE TRADITIONAL - HISTORICAL BASIS	6
THE DEVELOPMENT OF THE INTELLECT	8
HOW DO CHILDREN LEARN	9
THE CHILD - THREE TO SIX	12
THE BASIC LEARNING SKILLS	16
THE CHALLENGE	23
AN INVITATION TO LEARN	27
CONCLUSION	40
A BEGINNING.....HARTFORD'S FOLLOW-THROUGH	41
ACKNOWLEDGMENT	
BIBLIOGRAPHY	

THE PROBLEM

As we enter the decade of the seventies and its associated scientific and technological marvels, educators are becoming increasingly and painfully aware of the failures which beset that behemoth known as "the school system". Apart from the strident but well-founded cries from chroniclers such as Holt, Kohl and Kozol, we are at last beginning to consider those "opinion-polls" and "market-analyses" forced upon us by our captive consumers - Kids! Young people who have been too long a silent majority in themselves are informing us that amidst our advances in science, medicine and affluence, we may have closed the doors on the dignity of the individual and his quest for personal liberation; that the ideals and values of our forefathers may exist today only as myths; that education for the authentic, the real, the relevant is already a thing of the past and, indeed, has been since the last great wave of immigrants passed through Ellis Island during the first decade of this century.

In short, in questioning the structure of current society and its value system, today's youth is compelling the school to look to itself; to reexamine its structure, its practices, its curriculum and more than anything else its role. Perhaps during the course of this reexamination it will find that it cannot be all things to all people and must function as one of several institutions, political as well as social, operating in concert toward the true implementation of the cultural heritage established by our founding fathers and fulfilling, finally, the great promise of America as stated in the Declaration of Independence. The school's role is critical, however, and invariably leads it to a major reassessment of its traditional function and practices during the past hundred years. It is imperative, therefore, that during the coming decade, the school through its constituents place itself "in question" by seeking a meaningful solution to many of its current problems and questionable practices.

The first of these inevitably leads to the questioning of the failures in the urban settings, for it is there where these failures are most glaring and obvious. It is there, also, where the economically poor are most concentrated and the two cannot remain separated. Poverty is the beginning of the unending circle of failure and until the economics of the situation is resolved, any amount of educational intervention is quite hopeless. Society and school must "question" the injustices that have led to these economically deprived conditions and concentrate their efforts in their solution with the dignity of an individual's self-reliance and the feeling of self-worth. Educationally, from an urban point of view, educators must eliminate the debilitating terms "culturally deprived" and "culturally disadvantaged," for represented in the cities are several of its richest and most meaningful ethnic and cultural wellsprings. We should, on the contrary, address ourselves to the education of the poor and the disenfranchised, as created by the economic and political systems, and the ensuing intellectually deprived environments that result. In so doing, we may find that what we question in the cities may lead to subsequent inquiries into educational practices at all economic levels. Ghettos may not be the particular provinces of the poor and specific minority groups alone. There are racial and ethnic "ghettos", there are religious "ghettos" but sadly and largely unrecognized, there are emerging social, affluent and suburban "ghettos" whose problems and conditions have the potential of destroying in <u>all</u> children that which is inalienably theirs - the right to the <u>development of positive self-worth and intellectual ability essential for success</u>, not <u>only in school but in life in a participatory democracy</u>!

As a result, it is suggested that what is being questioned in the urban schools today should be asked of all schools tomorrow; that what is emerging as the learning style of the children of the poor may very well be the true learning style of all children; that the dramatically different and responsive learning environments being developed for certain city schools may be the models for the unleashing of the natural

creative and intellectual talents of all children in all schools!

IN - QUESTION

Education In Crisis

When an individual or a group or a society finds itself in a situation of crisis, it must invariably experience an agonizing reappraisal and resultant redirection of its goals if it desires to remain healthy and productive.

That education in 1969 is in crisis is no longer questioned by any but the most ardent reactionaries. Students and critics of modern education are responding to the symptoms reflected in the violence and anxiety of this society during the past decade. Some of these critics along with thoughtful educators, in preparing for change, are asking of themselves:

--- If education today is truly "relevant" and meaningful for the student of the seventies? Or, as John Holt suggests, are we interrupting a child's education by sending him to school? Are we truly paying heed to the "message" of the "dropout" - not only from school but from society?

--- If education has done little but pay "lip-service" to many of its professed goals? Are schools, in fact, responding to the individual needs of children? Are schools allowing young people to prepare themselves to develop the initiative and to accept the freedoms and the responsibilities required for full participation in a collaborative society? Are schools really willing to allow students to participate in the process of their own education?

--- If, in reality, schools in their static and prescribed role contribute to the further alienation of the individual? And by so doing condemn an ever increasing number of students to failure at a very early age.

--- If schools are genuinely interested in a positive working arrangement with the public, the parents, the social community and the business community? Or -

are educators jealously guarding for themselves the education of our youth, with tragic results?

To be more specific and in order to respond honestly to the general queries indicated above, it appears mandatory that educators and the public consider radical alternatives to the following practices and assumptions in the schools today:

1. The lock-step system of grade placement which erroneously assumes that a six year old should receive the same educational program as 25 other six year olds for 9 months in Grade 1 and then in Grade 2 as a seven year old, etc.
2. All 25 youngsters in a given classroom, seated passively behind desks, are dynamically involved in absorbing the "nuggets of wisdom" being proffered by the lone adult in that classroom -- an adult who, under the best of conditions, cannot be expected to keep up with the "knowledge explosion" of today.
3. The so-called "education" of these same 25 youngsters <u>can</u> take place in a <u>single</u> classroom or, in fact, in a <u>single</u> school building.
4. Formal education is a nine-month proposition which ends in June and recommences in September.
5. Reading is reading, science is science, and arithmetic is arithmetic and they are subjects and not processes. Therefore, they can be separated from each other and for the time being are neither relevant to each other or to the child and his present-day world.
6. One can accurately predetermine the intellectual ability of each one of those 25 youngsters (through objective tests) at a very early age by establishing an

I.Q. And that that I.Q. can become our expectancy standard for that child. One can do the same for his emotions, his psyche and his behavior, too!

7. Because he is a member of a particular ethnic, religious or racial group, the student is either superior or inferior as the case may be, and must be treated accordingly.

8. The best rewards and the most motivating for the students are either letter grades, percentage grades, or threats of failure for a specific lesson or a specific quarter or a specific year.

9. One can measure accurately and to his satisfaction everything a pupil has learned or failed to learn by devising objective tests of achievement.

10. Facts are the essence of education and there is a right answer for everything and the role of educators is to show the student how to come up with the answer to questions that he didn't ask in the first place.

11. Homework helps discipline the mind. Students should sit in their rooms at home each night and do 30 minutes more in each subject area of what they did correctly that morning.

One could continue on and on with a cryptic recitation of the injustices perpetrated on children daily in the name of education. To be treated in a more positive manner, in a subsequent section, will be the matter of the learning environment, the role of the teacher, commercial and published materials, the possibility for decision-making and options for students, etc. Suffice it to say that what is placed "in question" here is at the moment the challenge of the urban setting. The disenfranchised and their children see little hope in overcoming the situation as it exists presently. As a result, youngsters from pre-school age to high school age are "tuning out" and "dropping out" from lack of motivation toward the adding of any new dimension or meaning to their

present lives. These youngsters either do not know how "to play the game" or refuse "to play the game." Their counterparts in "middle class, suburban America" in an assumption by this writer, excepting in a few exceptional cases, are receiving little more of an educational opportunity. What may be working in favor of the suburban child, however, is the comfort and security of an environment rich in early experiences and a deliberate, although unconscious, inculcation of the "rules of the game." These children are more willing to accept passively the school conditions as they exist. Unfortunately for many, lost forever are the "liberating" qualities of true creative reasoning, involvement in the joys of learning and the achievement of their intellectual and emotional potential. The "renegades" in this establishment are, of course, the "troublemakers" and the "discipline problems" --they are usually boys! It is these youngsters, upon reaching the age of reason, who are questioning the injustices in their society and protesting the "hoax" perpetrated upon them. Unfortunately and in increasing numbers, as we are too well aware, many of these are the social and emotional "dropouts" from society and in many instances from life itself. They were not armed, in their early years, with the strengths of decision-making, self-determination, commitment and the responsibilities inherent in freedom!

In seeking antithetical alternatives to conditions existing in our schools today, it appears necessary that we investigate:

--- Some sources of our American tradition for the education of the young.

--- The most current investigations into the development of the intellect.

--- What we are learning about how children really learn.

THE TRADITIONAL - HISTORICAL BASIS

American educational philosophy and practice has changed little during the past century! Historically its organization is based on certain Anglo-European concepts of children as young adults moving through rigid sequences of mental disciplines. That

the intellect, like the body, is genetically determined (Darwin, Galton, Cattell) and that a series of prescribed stages of physical maturation will naturally insure a concomitant development of the mind. Of course, inherent in much of this early theorizing is the notion that certain races or ethnic groups were more highly favored by nature's genetic input - a notion not completely dismissed in certain educational quarters today.

Generally, this was one of the significant bases for the development of our American tradition of education. The "testing movement" during the early part of this century (following Binet) for the most part was a product of this thinking (Terman, Thorndike, Goddard). Until recently these tests of intellectual prediction and academic achievement have remained relatively unchallenged and have formed the basis of our educational philosophy and curriculum planning.

During this century there have been several abortive attempts to break away from these dominating concepts (Dewey, Dalton Plan, etc.) but the times and the conditions were, perhaps, unfavorable and reactionaries consistently"won the day." Obviously, for the majority in our society, the education process as it existed met the needs of the established order and to question it bordered on the heretical and sometimes "lunatic" fringe. In fairness, the established system did perform a necessary function at the turn of the century during the massive European migration to this young nation. In an orderly and efficient manner and in its own way it facilitated the "Americanization" and the assimilation of the varied and conglomerate groups seeking refuge and fortune on these American shores. It aided immeasurably in the development of a national spirit and the industrial giant of today. It also, in its way, maintained the status quo. It is this status quo that is being challenged today

and it is this challenge that is being thrown at the feet of American educators. Concurrent with these developments, especially during the middle of this century, we have seen emerge a group of psychologists, physiologists and educationists who are attacking those basic and original tenets of intellectual development which, as indicated, created the foundation for American education.

THE DEVELOPMENT OF THE INTELLECT

Since the early 1950s, in this country, there has been mounting evidence from research and investigation as to the nature of intellectual development. This research has been conducted by psychologists, physiologists and educationists alike. (J. McVickers Hunt , Jerome Bruner, D. O. Hebb, Carl Pribram, B. Bloom, Newell Kephart, M. Frostig). Working, perhaps, in different fields, they have concerned themselves with either the physiology or chemistry of the brain itself, the process of perception, the nature of learning or the coordinate functions of mind and body. Some have admittedly borrowed or have been inspired by the unheeded voices of the past such as Freud, Froebel , Pestalozzi and Montessori, or have awakened interest in the observations of the Swiss psychologist, Jean Piaget.

Based on the evidence of this research and on clinical observation of children, modern educators and parents are becoming increasingly aware of the following postulates:

--- that every child is born with a genetically determined intellectual potential (not I.Q.) and that this potential, for all children, may be much greater than heretofore supposed.

--- that the achievement of this inborn potential is probably most determined by the environmental influences and experiences during the earliest developmental years.

--- that perhaps 40% of the intellect is developed by the time a child is 5 years of

age and 80% before he reaches the age of 8.

--- that there may be a series of specific, cumulative and developmental periods of cognitive and affective growth for a child from birth to approximately 18 years of age.

--- that learning and intellectual growth are more than just associative or stimulus/response mechanisms but reflect an integration and constant feedback of stored past experiences along with acquired powers of assimilation and accommodation.

--- that the drive and motivation for intellectual mastery and development is inborn and naturally present in all children and that this natural drive may be at its height during the earliest years.

These oversimplified postulates are stated solely to emphasize the emerging importance of meaningful experiences during the early childhood years and the positive effect that those experiences can have on a child's later achievements. It may be during the crucial, first six years of life that a child learns the ground rules for social behavior, develops those attitudes toward others and life in general that he will carry for life. And, equally important, these may be the years when he acquires those basic skills, talents and perceptions necessary to learning how to learn!

HOW DO CHILDREN LEARN

That young children learn in a variety of ways, at individual rates and from intrinsic motivations is no longer questioned by American educators. Ironically, however, the traditional practices of total group instruction and prescribed, minimum courses of study utilizing lecture-type instruction remain the rule rather than the exception in the majority of public school classrooms -- even in our so-called "better" schools. In general, these malpractices continue and are reinforced by supervisory and

administrative evaluative devices and by the teacher-training institutions themselves. Thus that unending circle which frustrates positive change remains unbroken and an indictment against the profession that perpetrates it.

What has clinical observation of children, and in many cases intuitive assumption by exceptional teachers, indicated about the teaching-learning process:

--- children are more capable of intellectual achievement and at an earlier age than had previously been supposed.

--- the basic "ground rules" and "skills" for creative affective and cognitive behavior can be established between the general ages of 3 - 6.

--- learning is multi-modal in nature. That is, some children learn better through visual techniques and some through auditory or tactile inputs, etc. -- but probably through different combinations of the above.

--- learning proceeds from the concrete to the abstract and is initially inductive in nature. That the manipulation of objects, things, or even concepts and experiences, moves to a level of imagery or "ideation" prior to the final symbolization or abstraction of those experiences.

--- physical movement and involvement is an essential ingredient in early learning. The coordination of the mind and the body, the "eye and the hand" adds a dimension to the process of learning integration.

--- the senses are the organs of perception and the training and the refinement of these are relevant to the total developmental process of perception and subsequent "understanding".

--- language activities and experiences and early success with verbal and auditory abilities may be crucial elements in the later encoding and decoding processes.

--- young children learn a great deal from older children and, conversely, older children reinforce their learning by assisting juniors.

--- imitative behavior is a keystone of the young child. Each learns much from what is observed and demonstrated and not from what is "told".

--- children are capable of more than mere factual learning. They can achieve competencies in convergent and divergent thinking in the academic processes at an earlier age.

--- learning for the joy of learning can be its own reward for young children. The rewards of mastery and making sense of their world are intrinsic to all children.

--- child-rearing practices in our society usually result in different learning patterns for boys as opposed to girls.

--- there appear to be certain periods of extreme sensitivity in young children when they are most receptive to the acquisition of particular behaviors and skills. i.e. reading at age $4\frac{1}{2}$ to 5 and handwriting skills at age $3\frac{1}{2}$ to 4.

--- young children <u>can</u> make critical choices, select options and assume responsibilities in a meaningful and responsive milieu.

--- how children feel about themselves and about their talents and their abilities is positively related to their accomplishments and their successes.

--- young children in their eagerness to learn probably do not make a distinction between what is "work" and what is "play".

Although the previous observations are generally empirical in nature, there is an increasing body of data being reported which reinforces these and many other "hallmarks" on the nature of learning. The observations being reported here, and those to follow, deal primarily with children from the ages of three through six. Because this developmental period is emerging as an extremely significant one to the later "learning years", it becomes necessary to investigate the characteristics and basic needs of children during these ages. It also requires a basic understanding of the learning skills and behavioral attitudes that are acquired during these years and what can be a practical and effective approach to a creative and responsive environment which fosters the development of those skills and attitudes.

THE CHILD - THREE TO SIX

Up to the approximate age of three, the child has lived in a world which has been predominantly family oriented. His life, although primarily sensory and motorically dominated, has been one of wonder, awe, cause and effect. His quick and unfettered mind has literally been "drinking in" or "absorbing" the sights, sounds, tastes and textures of all that surrounded him in an attempt to gain some degree of sense and order in those surroundings. During those years his accomplishments have been marked by tremendous strides in locomotion (creeping, crawling, walking, etc.), communication and manipulation.

Around age three, armed with these and many other skills and talents, the normal child is developmentally ready for experiences that lie beyond the relatively confining environment of the home. His is now a world of exploring -- by jumping, climbing, throwing and running. His eager mind is constantly seeking "labels" for all that he has experienced during his earlier years. He is a talker and a listener and a questioner! Above all, he continues to be an observer and an imitator, and because of what he is and what he wants to "become" he, like

every other child, has an inalienable right to the satisfaction of certain needs or "tendencies" as Montessori calls them.

Maria Montessori's many contributions to early childhood understanding, during the past half-century, are becoming more and more accepted in light of current research and practice. Perhaps more than anyone else, she has highlighted the "rights of the child" during his earliest years and the adult's responsibility for the preparation of a proper environment which assures and allows the child to develop and acquire those rights. Her basic tenets in this regard refer to those inborn impulses or tendencies (needs) that children must satisfy in order to develop psychologically, physically and intellectually during crucial, sensitive periods which are at their height once, and only once, in each child's lifetime. Generally these "needs" are:

1. A need for independence - a child's primary aim from birth is to be independent of the restrictions of his environment. This is possibly the most significant factor in man's erstwhile attempt to control his world.
2. A need for order and sense - this aim in the child is a basic tool through which even more independence is engendered. Labeling, classification, categorization, comparing, etc., all lead to a more manageable understanding of one's surroundings and, of course, one's survival in those surroundings. Logic, truth and reality are essential ingredients in the satisfaction of this basic need in children.
3. A need to communicate - the mystery of language remains unique to man and is probably his most singular and outstanding accomplishment. Inborn as a need and acquired solely by experience, language development during this age period is most highly significant. Communication with the environment and with society during this age assists the child immeasurably in the creation of his intellect.

4. A need for coordinated movement - the coordination of the mind and the body is extremely significant to the developmental and intellectual process during the 3 - 6 age...movement coordinated with mental activity.

5. A need to abstract - closely associated with the development of language is this innate human need to abstract in one's surroundings in order to liberate oneself from the need of actual objects and experiences in order to utilize them for extended learnings.

6. A need to calculate - innate, too, may be the need to have repeated experiences which allow the child to develop such "calculative" skills as are inherent in body control, walking, estimating, mathematics, etc.

7. A need for repetition - internalization of newly acquired skills results from repeated experiences with those skills.

8. A need for gregariousness - to be with others, to learn from others, to work in concert with others and to experience common endeavor emerges as a significant factor for the 4, 5 and 6 year olds' development.

9. A need for concentration - can be satisfied in a child only with repeated experiences in a responsive environment which allows for repetition and perfection (success) at his own rate with manipulative, self-correcting and sequential teaching materials. Precision is a significant factor for the 3 - 6 year olds. The resultant mode, perseverance, is an essential intellectual tool.

10. A need to satisfy curiosity - the curiosity of the young child is insatiable. It is the foundation of a curiosity - engendered curriculum and as such should place the child in contact with an environment which challenges him in the areas of music, science, mathematics, etc.

11. A need for the development of a creative imagination - not to be interpreted as "free expression", creativity is inspired by challenging a child's power to see relationships and to imagine that which is not visible. Creativity occurs when he encounters a new experience outside his accumulated fund of knowledge and there is a behavioral accommodation based on prior experience. Creativity does not "just happen"; it develops from a basic fund of skills!

Stated simply and directly, a trait of Dr. Montessori, the above impulses or needs form the source for the creation of a learning ambience for children during the 3 - 6 year old period. This age child is still deeply involved in the creation of his intellect and the acquisition of those basic learning skills which allow him to move with self-control, determination and creativity during his subsequent years. An environment at home and at school should serve to satisfy these needs at a period in the life of a child when the results are of inestimable value. This requires the adult's understanding of the young child's myriad physical, social and emotional needs...certainly more than is discussed here. Nonetheless, these were introduced solely to add a significantly different dimension to what is already known about children and how they learn. It should be noted that in this ever expanding age of technology and super-development of a modern living standard, all children, the affluent and the not so affluent, are to some degree being cheated of the experiences which can lead to the satisfaction of their basic intellectual needs. With the headlong dash for comforts and amenities, too much is done for children seeking independence; too few have the opportunities to explore and manipulate. In many instances, children passively communicate only with TV and other electronic devices and most unfortunately there seems to be less and less time for those essential interactions with adults and the physical world. Developmental deficiencies during these years can be cumulative and can inhibit the flowering

of the child's intellectual potential.

THE BASIC LEARNING SKILLS

That the demands of present and future society on today's young children will increase is unquestioned. Modern technology and increases in leisure time, combined, result in an urgency that is unparalleled for any previous generation. These increased demands, with perhaps fewer opportunities for the acquisition of those skills necessary for meeting those demands, is one of the more salient problems to face educators and parents as they plan for schools of the future. N. C. Kephart in his "Slow Learner in the Classroom" observes that the gadget-prone, mechanical, impersonal world of today, by posing a potential physical hazard to young children, no longer allows for the environmental interaction by which those children acquired many of their basic skills - at a time when the acquisition of those skills at an earlier age may be crucial. More and more observers of the social and educational scene, in addition to Kephart, are becoming increasingly aware of the need for allowing children to acquire the basic learning skills at an earlier age in order to get on with the all important "humanizing" elements of their education. The need for the development of the "whole child" is probably more critical now than at any time in the history of civilization. There must be less compartmentalizing of children and knowledge! A child is physical, emotional and intellectual all the time and at any given time. A child in dealing with his real world is investigating science, mathematics, poetry and music, etc. all the time and at any given time. A program that truly integrates the whole child and a curriculum that provides that child with the humanizing processes rather than academic subjects is one that, following the acquisition of the basic skills, gets on with the business of liberating children by capitalizing on many of those qualities and needs previously noted: the natural

inventiveness of children; the inborn curiosity and motivation; the ability and desire for children to work together and in concert; the need to express themselves creatively; the need to organize and order their world; and above all, the need to "produce" and "create" themselves and find significance in what they are learning!

It is essential, therefore, that a curriculum look at the basic skills: as means to an end and not as ends in themselves; as only one part of the child and like the child, they cannot be fragmented into subjects; as only prerequisites to knowledge, for true knowledge is personal and peculiar to each learner and his interaction with the real world.

If the basic skills are viewed in this light, it is seen that those skills necessary to the actual acquisition of knowledge are considered the cognitive skills or those of the cognitive domain. What one does with that knowledge and how one interacts with others and his social world are related to the affective domain.

The cognitive skills - there are four major areas of development in the individual through which he learns to adapt to, overcome and understand his environment. They are:

Perceptual - Motor Development

Language Development

Concept Formation

Problem Solving

Perceptual - Motor Development

Integral to the whole development of the child is the development and awareness of his body and how it relates spatially and temporally to the environment; the development of the senses as learning receptors; the psychophysical integration of fine and gross motor activities; the functional utilization of these perceptual and

motor skills(Valett, Kephart, Frostig, Montessori).

These skills include:

Gross-Motor Development (large muscle activity)

rolling, crawling, walking, running, jumping, skipping, body-part identification, body localization, muscular strength, etc.

Sensory-Motor Integration

balance, rhythm, spatial organization, directionality, laterality, temporal orientation

Perceptual-Motor Skills (sensory refinements)

auditory acuity, auditory memory, auditory sequencing, visual acuity, visual discrimination, figure-ground differentiation, visual memory, visual-motor integration, tactile discrimination, etc.

Language Development

Probably the most crucial area of development relevant to success in school and society is the ability to comprehend and use language. Language is critical to the later and higher order processes of problem solving, communication and information retrieval. The basic language skills are:

Vocabulary Development

labeling, understanding words, etc.

Fluency and Encoding

verbal expression, fluency of speech, sentence structure

Articulation

correct pronunciation

Word Attack Skills

letter recognition, sound-symbol relationship, phonetic analysis, use of context clues, etc.

Comprehension

story recall , meaningful relation of words in sentences, paragraphs and stories , etc.

Writing

integration of visual-motor skill, tracing, copying, communication of ideas through paragraph, letter, story, etc.

Spelling

higher order combination of visual-motor integration, vocabulary knowledge and phonic awareness.

Concept Formation

When concepts are formed, it is a step beyond learning the mere labels and vocabulary of objects and actions. The formation of concepts is a significant step toward higher order abstraction and a concern on the part of the learner with ideas, groupings, classifications and their relationships. Meaningful, varied and repeated experiences are the roots of concept building and concepts in turn, through inductive measures, become the tools of divergent and creative thinking.

Skills necessary for concept formation are:

Identification	Seriation
Classification	Discrimination
Relationships	Categorization
Contrast	

Concepts are inherent in:

size, location, color, number, weight, length, mass, volume, comparatives, superlatives, position, shape, etc.

Creative Thinking

In order to think creatively and to solve problems a child must be armed with the foregoing perceptual-motor skills, language facility and the myriad tools of concepts and ideas. Thinking and problem solving skills are necessary to finding answers or alternatives to open-ended situations or questions which face children daily. It must be borne in mind that this kind of activity is concurrent with the development of the three other basic-skill areas and the only way children learn to solve problems is to experience and cope with problems in a meaningful context.

Skills and techniques for solving problems are:

Inductive Reasoning	Part-Whole Relationships
Eliminating Knowns to arrive at Unknowns	Guessing
Reassessment	Verbalizing
Discovering Rules of the Game	Convergence
Divergence	

Glen Nimnicht in borrowing from O.K. Moore classifies problems for young children as physical, interactional and affective.

Physical problems are those which require one to react to his physical environment. In essence, the individual manipulates the environment without being manipulated by it. Physical problems include the working of puzzles, solving mathematical problems, etc.

Manipulating a situation which involves others who in turn manipulate the individual is termed an interactional problem. Weighing alternatives, probability, strategy are all techniques used in the solving of interactional problems. A simple, childhood game of hide and seek is an example of this type of problem solving. So is bridge. As is poker!

When the emotions become involved in a problem, it is an affective problem. Many problems of young children have affective overtones. Problems of an emotional

nature at home, with other children, with parents, with lack of success, etc. can adversely affect the solving of physical and interactional problems. Conversely, the inability to solve physical and interactional problems can create affective problems which cannot be overcome. It is this relationship of the emotions with the cognitive and the physical that leads naturally to the second major basic learning area - the Affective Domain.

The Affective Domain

How a young child feels about himself and how he feels others view him is unquestionably related to his successes with learning and in interacting with the world of people and things. This feeling about oneself is commonly referred to as self-image or self-concept. The process of developing a self-image begins at a very early age -- perhaps within the first few months of life. By age three, a child pretty well assumes a posture to the world based on what significant skills, successes, and interactions he has experienced up to that time. The reinforcement of a positive posture or the redirection of one that is negative will be a direct result of the significant experiences provided that child as he enters the world outside the home and the world of the school. The years 3 - 6, as in the area of cognition, can be optimum years for the acquisition of many productive, affective behaviors. Needless to say, the provision for the satisfaction of the child's basic physical and emotional needs along with those intellectual needs already discussed is conversely prerequisite to or the result of a positive self-image.

Nothing creates confidence and a feeling of worthful identity like success and in turn, nothing breeds success like success itself! Experiences, encounters and programs which allow a child to develop a "success - identity" may be the core of a true and authentic learning environment for tomorrow's children. To deny children a success-oriented ambience is to deny them a fruition of what may possibly be

their most fundamental psychological motivation. William Glasser, a psychiatrist/philosopher of this decade, in his publications, Reality Therapy and Schools Without Failure, implies that the ultimate goal of any individual is the internal creation of a positive identity. Basic to this creation are the components of "love" and "self-worth". He sees the home and the school as the two earliest pathways to "love and being loved". Love in the school setting naturally takes on a different meaning--a meaning not too different from that symbolized in the psychedelic jargon which is in vogue with today's young people. It is the love of caring, of responsibility and the love of involvement.

Translated in terms of the school, this "success-identity" can possibly be achieved for each individual - teacher and student - through an amalgam of teacher techniques, commitments and encounters. They are:

--- a genuine commitment that teacher and pupil have a responsibility for each other and truly care about each other.

--- an understanding that social responsibility can be learned through early experiences.

--- an understanding that responsibility is assumed along with freedom.

--- the knowledge that responsibility for learning belongs to the learner and requires hard work and discipline on the part of the learner.

--- a life-force involvement on the part of the teacher to the degree that it will release the built-in motivation of the student.

--- an assumption that freedom does not mean license.

--- an understanding that children can be involved in the making of decisions and value judgments.

--- a "follow-through" process of commitment teaching by the adult which implies that the "caring or love" for the child is abrogated if the adult accepts the

breaking of the commitment on the part of the child.

--- the understanding by the teacher(s) of the dignity of the child's culture, race, skills, abilities, talents and shortcomings.

--- a commitment by the teacher(s) that all children, under proper conditions, can achieve varying degrees of success.

All pervading in a learning environment, therefore, must be this development of social responsibility, commitment and success identity for children. This must occur if the unending cycle of early school failure for too many children is to be broken. Discarded must be the many demeaning strategies employed by adults in rearing and educating young children...strategies which withdraw parental or adult love as a punishment for failure; which proffer the sop of letter grades or promotion or material reward for learning success; which allow the adult to say, "Do as I say, not as I do."; which shame or denigrate a child; and many more which fail to recognize the dignity, the rights and the needs of every child.

THE CHALLENGE

What has emerged, hopefully, from the foregoing postulates and assumptions, is a clear and direct challenge to parents and educators -- a challenge for change in the early learning experiences and opportunities for children. Implicit in this challenge, however, are the possibilities for a dramatic reappraisal of programs for all students at all ages. For what is valid, as need, for a four-year old may be different only in degree and scope for a fourteen-year old or a young adult.

In summary, then, the challenge is to plan and program strategies for children in the seventies that may be dramatic answers to:

--- the decimating notion that certain children are not capable of learning.

--- the newborn respect for the dignity, rights and capabilities of all children.

--- the newly respected knowledge that the early years are crucial in the development of inborn potential and that meaningful and rich experiences during these years may form the foundation for all later learnings and attitudes toward creative education, society and the self.

--- the exhilarating breakthroughs that are adding new dimensions daily to knowledge of how children at different ages learn and develop.

In order to accept and meet this challenge, certain changes in traditional practices and attitudes should occur or rather must occur. The gauntlet is down. The time for lip service has already passed. Educators must "fish or cut bait". If education, in its true role of societal catalyst, is going to lead this generation from the anguish of the sixties towards the promise of the seventies, it must seriously consider the following proposals:

1. That formal schooling, as we now know it, commence at age 3 for all children on a year-round basis. For several reasons, practical as well as psychological, it is suggested strongly that each child enter school on his third birthday (Glasser).
2. That grade-level designations be eliminated and be replaced by mixed-age, developmental family groupings, i.e. Ages 3-4-5, 6-7-8, 9 - 12, 12 - 15, 15 - 18.
3. That subjects and disciplines be integrated into larger process-centered, curriculum constellations such as Communication, Study of Man, Ecology, etc. and that each of these constellations be considered "message" or "interest" centers which are truly multi-sensory, multi-instructional and multi-disciplinary in nature.
4. That rewards of promotion and letter grade be eliminated and replaced by intrinsic, success goals determined by the students' unique interests, talents and abilities.

5. That objective testing be used by the students themselves and only as self-checks in order to acquire those facts necessary for creative thinking and learning.

6. That the idea of "homework" be replaced by 'community-work" so that what takes place in the school may have true meaning and relevance in the student's total world.

7. That there be a developmental structure only in what will be called the school for the sole purpose of having a meaningful, critical mass of mixed-age children operating with mobility in many "interest or message" centers.

8. That the primary and possibly only goal of curriculum planners should be to maintain an environment which allows each student to achieve and maintain a unique and individual "success identity".

9. That the community become totally involved in planning for change through meaningful and dynamic participation.. a commitment to the "school as community - the community as school".

10. That the teacher training institutions accept the same challenges and begin, finally, to prepare their students for becoming the initiators and leaders of change in the schools.

And these would be only a beginning! In essence, what is being proposed as change, is an orderly reconstruction from within the confines of the present educational establishment of the entire pattern, goals, curriculum and organization of schools as they presently exist. It is not the intent of this writer to belabor the point -- nonetheless, it must again be reiterated -- time is running out for those who are in a position of power and authority to effect a positive and orderly change. It is necessary for the present power structure of education, this writer notwithstanding,

to heed and listen to the young people who live in a world entirely different from the one which founded the present system of education and, in fact, a world entirely different from the one presently inhabited by its contemporary decision-makers. It is mandatory that educators learn from the young, those goals, desires, perceptions and concerns of the "now generation" because the future for them is "now" -- it is not one which is deferred and for which the young meticulously prepare based upon the values and traditions of their forebears. It is a world, unlike any in history, which is globally concerned with injustice and the downtrodden, the poisoning of the environment, the "liberation" of the individual, the humanizing of the universal community and, finally, the search for the true meaning of existence. The young must be allowed to seek their answers and solutions in their way and in their time. It is only for their parents and teachers to provide them with the strength of commitment, the skills of learning and the tools of a meaningful dialogue between the generations which allows both the young and the old to grow and prosper with change.

It is the theses of this report, then, based upon what has been already presented, to suggest and empirically support that:

--- a child should be allowed to acquire those commitments, skills and behavioral strengths basic to his needs and aspirations during his first six or seven years of life.

--- these acquisitions can come about only through a collaborative and concurrent ambience in the home and the school.

--- the environment for the school (3 - 6 year olds) by necessity requires a design and a structure which is constantly open to change but wherein the individual acquires the codified basics of his culture, those mechanisms and "things" (reading, writing, etc.) necessary to communicate in his culture and those social and behavioral elements which will forever extend his existence.

--- with the power of these basics internalized, as his, the child at age six or seven, at a point in his life when he is optimally creative and resourceful, can set upon the task of self-realization.

By intent, this report will limit itself, in support of the above, by presenting a design for a learning environment for children ages 3 - 6. The purpose of the design is to incorporate into a viable model, the assumptions already stated regarding the learning process, the needs of children, the basic learning skills and the challenges which confront educators.

AN INVITATION TO LEARN

Carla enters the room, looks about her and with little trepidation half-skips to the corner where the day before she hung a half-dozen cleaning cloths to dry. She busies herself by plugging in an electric iron and adjusting an ironing board. Carla is three!

Tyrone places his coat on a hook, moves directly to one of the teachers and informs her that he has decided to "write" another story for his book. Tyrone has already "written" and illustrated a dozen or so experiences compiled under the prodigious title, "Me, My Cat and Mama". Tyrone will read his book to any receptive ears and read it well and with the passion peculiar to a five-year-old.

Chattering excitedly, Claire and Jeremy move to the area of the room known as the "Science and Living Things" corner. Jeremy who is 4 has asked six-year-old Claire to help him with the "Sink and Float Thing". Claire was needed because she could read the cards which told them what materials were needed and which procedures to follow. Claire enjoys her role very much and Jeremy looks forward to the not too distant day when he "won't need no girl to do all the things in this corner."

The next boy to join the group is Richie who is six. Richie enters in the usual apprehensive manner he has displayed for the past year and a half. Of late, however, the painful tension has been observably lessened and there is more of a determined gait in his step as he moves to the activity he invariably selects first -- the "paint and clay table". Mounds of soft clay and unending jars of paint and brushes are constantly available in this area. Fourteen months ago, Richie was preoccupied solely with the painting of black cages enclosing shadowy figures of people, birds and animals. Today, like the past week, he has selected the bright yellows and oranges and reds to reflect what the teachers have observed as a dramatic change in Richie's outlook and feeling about himself. He has even shown an interest in wanting to read!

And so it goes! Children ages 3 - 6 enter the classroom in twos and threes, select collaborative or individual activities and go about their very serious "work" with a joyful determination that is lacking in many of today's school settings. There is a tolerable "hum and buzz" of activity but certainly not the anticipated chaos associated with "turning fifty children loose" with shelf after shelf of materials, objects and games.

This is a classroom which is carefully designed to be not only responsive to the needs of these children, ages 3 -6, but which is clearly "invitational" in its appeal to very young children. It is an invitation on the part of the adults who created it and on the part of the environment itself which allows children to learn about themselves and for themselves. It is an invitation for children to continue to "produce" themselves intellectually, emotionally and physically and at the same time do something in the process for the adults and the "system" responsible for it.

The introductory narrative to this section gave only a hint of the total, invitational atmosphere of an environment that is completely planned for task-oriented learning encounters for young children. To the untrained eye, the effect is casual, relaxed and, generally, unplanned. This is a specific goal of the planning which created the effect. The main goal, of course, is to modify the unique behaviors of each child in the classroom indicated above. For, what is learning but an internalized behavioral modification as a consequence of a particular response. According to Norman L. Breyer, a behavioral psychologist from the University of Connecticut, educators presently possess the necessary tools and technology for controlling behavior. It is only a matter of deciding who is going to do it and how and with what product in mind. It is just this, the determinant as to what the product of the schools should be, that is not specifically defined by so many educational communities today. The goals of most school systems are veiled in nothing but implied assumptions which result in ambivalent and ineffective school curricula. Once the specific end-product or goals of a school are realistically determined by the teachers and the parents of a particular school (for they may differ from school to school and community to community) the curriculum planners can then go about the task of deciding the who and the how by systematically analyzing the components of the behaviors which are to be modified (Breyer). The stated theses of this paper imply strongly that it is a planned environment, responsive to the basic needs of children and invitational in nature that will produce, at a young age, children who are responsible but inventive, committed but flexible, curious but resourceful, and above all, human beings imbued with concern and judgment. With these qualities, and with adult understanding and guidance, a curriculum for children will emerge from the children themselves. The main goal of a learning environment for the 3 - 6 year old is to provide children with those experiences necessary to the achievement of the

above qualities along with the functional tools (basic skills) of learning.

The chief and critical elements of such an environment are: the children, the teachers, and the physical environment itself. All three are of equal and crucial importance and one cannot exist without the others. Each should be seen as a point on an equilateral triangle -- as specific entities contributing to the unity of the whole! It is this whole that can result in a valid and true humanizing of the process known as education.

Because the needs and qualities of the child have been discussed in the earlier sections, it remains to consider the physical environment and the teachers.

The Physical Environment

At the outset, it should be understood that the use of the term physical environment is used solely for descriptive purposes. The physical environment becomes an affective, responsive environment when it is placed in contact with the child and the teacher, who in turn imbue that environment with more and more affective qualities -- as an unending and regenerative process.

Structurally, the environment can be many things. It can be a single, traditional classroom for 20 or more children; it can be a suite of two or three rooms for 40 or 50 children (by removing or opening walls); or it can be a planned, modern, open space for 75 or 80 children. It can be a play area close to the classroom or a natural setting at a nearby park and it can be the mortar, brick and pavement of an urban neighborhood and a museum, and a bus ride, and .....whatever or wherever it is the teacher, through planning and understanding, helps children transform that which is physical into that which has meaning, life and relevance.

Initially, the most singular feature of the classroom setting is its obvious "decentralization". Gone are the desks or tables in groups, rows or central cluster. Gone is the teacher's desk in a position of central control and dominance. Rather,

one is immediately aware of several "areas" or "interest centers" created by low, easily moved dividers placed perpendicular to the wall. These dividers, or modular units, can be open-shelved bookcases, display tables and stands or storage cabinets. Materials, equipment, learning devices, books, etc. are placed open to view and easy access by the children, in a "super market" fashion, on the shelves of these units. Each of the areas, though separate, is integral to the total flow of the individual and small-group activities that transpire during the course of the day in that room. There are small groupings of tables and chairs for work in each area as there is adequate floor area for activities which require more space. Roll away rugs are used by children on the floor to protect materials, control noise and especially to provide a "perceptual turf" which serves as a boundary for a specific child at work. The modular units and furniture, as well as the materials themselves, can be "color-coded" to contribute further to the uniqueness of each area. One immediate advantage to the distinctiveness of each area is apparent as an orderly classification and categorization of the room itself -- a need and a skill for this age group -- plus an environmental aid which allows children to move independently, at will, to any part of the room.

Bearing in mind the integral interrelationships of the various areas (another skill to be developed) the major work centers to be established in an ambience such as this would be:

Housekeeping and Practical Life - stored here are the materials and equipment necessary for activities such as scrubbing, washing, polishing, pouring, sweeping, ironing, etc. There should be a water supply included in or near this section. (If no tap or sink is available, it can be used in basins and stored in plastic containers.) Nearby or as part of this area would be facilities for "water play", painting, clay, brushes, etc. Apart from the expressive joys of "messing around" or creating,

the "housekeeping" activities develop: experiences for language and vocabulary development; provide the source-base for an unlimited number of percepts and concepts; coordinate many fine-motor and gross-motor skills and, above all, provide the child with the "tools" wherein he can operate freely and independently in the classroom. With these "tools" he can assume the responsibility of maintaining order in the total environment (as respect for others and materials), he can better handle more intricate materials, he can clean up (without adult trauma) any accident he may have during his work, he can pour his own milk or juice and enjoy a cracker when he so chooses. An essential area, it is basic (although indirectly) to many subsequent skills of measurement, calculation, writing and judgment.

Sensory Refinement - as the receptors of the environment, the senses can be provided with many meaningful activities and experiences which sharpen and heighten their activity. Whether those experiences are uni-modal (use of a blindfold) or multi-modal, the many materials in this section are selected to isolate such specific perceptual qualities as height, weight, length, color, sound, touch and smell. The materials, also, extend these qualities to the comparatives and the superlatives by allowing activities such as matching, pairing and grading. Spatial and temporal tracing, use of templates and geometric shapes, creative design, puzzles, solids, etc. all provide children with further development of vocabulary and language; many indirect skills for mathematics; more fine eye-hand coordination, and most important, the concepts and the labels for many of the abstractions they will encounter when they commence to read, manipulate numbers and solve more intricate problems.

Mathematics - the unity of mathematics is developed and maintained by the materials and experiences planned for this area. Indirect and manipulative preparations for later abstractions in arithmetic, geometry and algebra are achieved through many

materials designed to develop exactness, the ability to see the logic and sequence of numbers, to descriminate shape and form and, finally, the ability to compute and solve problems. Numeration, one-to-one relationship, seriation, base-ten, simple fractions and decimals and the powers of numbers are a few of the challenging concepts that interest children with materials specifically designed as manipulative devices, games and activities. Included in this area, or nearby, should be a woodworking area or constructive workshop where many of the skills are extended in practical and purposeful terms. Inherent in these activities are, of course, further extensions of vocabulary, language, perceptual and motor abilities.

Language - implicit in all of the areas and activities is the development of language. This interest center, however, is dominated by a wide selection of reading materials -- at all levels of interest and for all manners of purpose. A small, secluded nook for private and personal perusal and reading is essential here. Here, also, are the many manipulatives and devices designed for learning to write and to read. Sandpaper letters and numbers, movable alphabets, letter recognition, sound-symbol relationships, vowel games, blends, digraphs, etc. Opportunities for writing abound in this and the other areas. Experience stories, creative stories, experiments and record-keeping all are encoded by teacher and/or child at any meaningful and electric moment. Reading and writing are considered "skill-mates" along with listening and speaking -- all lead to the unity that is language. Part of this area should be considered a "listening center" for tapes and earphones, language masters, record players, etc. Included here would be mechanical devices such as a typewriter, printing press, T.V. and cassette recorders.

The language center is undoubtedly the hub of the total environment and its preparation is crucial. It is here, finally, where reading and writing especially are to be considered processes and not subjects -- where different children learn

the process in different ways or combination of ways; where skills in phonics and linguistics emerge from an experiential base; and, finally, where reading and writing become internalized only to the degree that they are functional in activities such as mathematics, science, history, woodworking, etc.

Science and Living - it is in this center where the "invitation" rests for children to begin to explore, understand and effect their many "communities". It is here, also, where their interests are "piqued" to the degree that the skills, perceptions and attitudes from the other areas in the environment are truly "integrated" in the pursuit of their individual interests. The science and living interest area should, therefore, become a literal "message center" that is dynamic and open; exciting and flexible; uncertain and unpredictable; predicament creating and constantly in question with the environment -- for these are the qualities of the world these children will challenge! The nature of this area may change daily. It will allow possibilities for learning the basics of scientific inquiry, the concepts relative to economic and social interdependence, the skills of observing and effecting societal and ecological change, etc. The materials and techniques are available today. It is their inclusion and implementation in a center such as this that is essential -- discovery-oriented science and mathematics episodes; economic issues; foreign languages; cultural studies; man and his environment; time and space studies.

Creative Play and Music - in this "expressive" area there are many opportunities for further cognitive and affective growth. Language development, especially listening and speaking, vocabulary growth, concept extensions, motor coordinations and social problem solving can be the highlights of creative play and music activities. Role playing, creative dramatics, simulated social and economic units such as "Wendy Houses", stores, clinics, etc. add the necessary dimension of reality to the experiences planned for and created by children. Musical encounters with large

instruments (Orff), patterning and sequencing (Kodaly) further intellectual development in a naturally motivated interest area.

Classroom Instructional Materials - the physical environment, as structure and organization, is successful only to the extent that the materials of instruction are selected and constructed with care and precision. These materials group into two general classifications: didactic and exploratory.

The didactic materials are those designed, generally, to achieve a particular objective following a learning episode by the child. Understandably, the bulk, but by no means all, of the learning apparatus in an early childhood center is of this nature. The innumerable basic skills necessary to this cognitive period, however, require the specificity inherent in the behavioral modification techniques most recently developed by Mager, Valett, Peter. Techniques such as assessment, diagnosis and prescription of learning needs in children, used so effectively by teachers in the special education area, are essential to the individual programming dictated by this design. Materials of a didactic nature complement prescriptive techniques and, together, provide another critical element in the environment. The didactic materials can be selected and utilized on the basis of several criteria. Didactic materials should:

--- be attractive and colorful in order to appeal to the child. They should be maintained in this condition at all times.

--- isolate a specific quality to which the child's attention is drawn. i.e. color, weight, sound, a particular letter, etc.

--- present one difficulty or a series of specific difficulties at one time

--- provide manipulative action or movement on the part of the learner.

--- provide the child with the possibility of repeating the activity without adult supervision whenever possible.

--- be designed to result in a specific, behavioral change which is measurable.

--- provide a control of error which further challenges a child to repeat the activity without external correction. Control of error can be built into the activity itself or can be one which is built in a prior ability already acquired by the child.

--- be limited to the degree that the child can successfully complete the activity within a reasonable amount of time.

Although the didactic material is designed generally to effect a specific behavioral change, it does not preclude variable creative insights following repeated experiences with the material. Activities can be designed, however, with just such insightful creativeness as their objectives. These are more exploratory and discovery oriented. Exploratory materials, too, should be attractive, colorful and manipulative in origin. They are important insofar as they are preliminary to the development of critical thinking and problem solving abilities such as convergent and divergent thinking, guessing, predicting and "knowns and unknowns". They give children early experiences with observing and collecting data, organizing, hypothesizing, interpreting and, above all, imagining.

The manufacturers of classroom materials have reacted positively to the needs and challenges of tomorrow's children. Being produced today are many devices of inestimable value based on the criteria indicated above. It is the role of the program designers to evaluate these materials and adapt them to their needs and to the children. The Educational Development Center of Newton, Massachusetts has created in their elementary science packages such exploratory experiences as "Small Things", "Peas and Particles", "Mystery Powders", "Attribute Games" and "Mirror Cards" -- all adaptable to 5 and 6 year old children. The Children's Museum in Boston, by

creating "Matchboxes", appeals to sensory experiences for a multi-modal approach to cultural and social investigations. Much of the didactic Montessori apparatus is being produced in this country, although on a limited basis. "Games" through role playing and simulation are being developed for use by very young children. In addition, more and more manufacturers are perfecting programs for computer assisted and computer prescribed instruction which can perform, very efficiently, the task of teaching the basic learning skills, thus freeing the teacher for the extremely important role of "behavior-modifier" in the evermore significant affective area.

The Teacher

The role of the teacher in a design such as this was deliberately deferred to this point in the discussion in order to highlight the poignant role of the adults in an early learning environment.

It should be noted at the outset that no single adult, unless of exceptional physical stamina and ability, could maintain a program such as this for 25 or so children for any extended period of time. The adult/pupil ratio must be decreased through the inclusion of an additional person or persons. The adults, working with children in a responsive, invitational environment, then, are to be considered the "teachers" in this discussion. Although one, because of a specific and extended professional preparation, is considered by law as responsible for the learning that transpires in the educational setting, the other(s) as aide, paraprofessional or, educational assistant has a function that should by no means be considered demeaning or secondary. Each role is critical; each is inspirational; each requires talents and training; each can be extremely rewarding and one cannot function effectively without the other.

The teacher, it should be recalled, is one with the environment and the child. It is the teacher, with the support of supervisors and administrators, who is the key

to the creation of the unity that is the "environment". As such, a teacher should possess particular qualities, understandings and skills toward that end. In general terms and in no particular order, these are included in the following assumptions relating to the preparation of the teachers for an invitational environment:

1. The teacher, himself, is or will become the possessor of many of the goals envisioned for the product (student) of an invitational environment.
2. The teacher views himself as central in the development of a success base for every child in his particular learning environment.
3. Theoretical knowledge in curriculum, psychological and social areas are supportive and essential to the teacher's success.
4. The teacher's perceptions of children are critical to the success of an invitational, responsive program. Relative to these would be the teacher's perceptions toward his own adequacies, perceptions of a culture different from his own, toward children and their learning problems, toward learning itself and the infinite potential of a possible change in attitude on the part of the teacher.
5. Respect for children, their capabilities and aspirations may be gained or increased as the teacher experiences repeated interactions in an invitational setting.
6. Commitment may "produce" a teacher, much as it does a child, and in so doing, may be invaluable toward a collaborative "self-realization" of both.
7. The dignity and the integrity of the child, his community (parents) and his culture are paramount. The knowledge that certain people are poor or certain sub-cultures are different does not preclude understanding. One can never place oneself in another's culture or circumstances. That is a fact. A teacher cannot be expected to. What can be expected, however, is a genuine cross-cultural empathy (not sympathy), a non-judgmental understanding and the acceptance of people as people.

Based on these assumptions and their acceptance, what are some of the specific functions and responsibilities of a teacher as a mediator of responsive learning:

--- the teacher is an observer of the child -- how and why he learns, how he interacts, his needs, how he feels about himself and how he feels about his world.

--- the teacher is a guide for children -- based on observations and insights for each child, the teacher leads and inspires that child toward ever expanding knowledge of himself.

--- the teacher is a model -- not necessarily of what the child should be but of the many qualities and options open to each child in a given environment.

--- the teacher is a manager -- not so much as a practitioner or a manipulator but as a human, problem-solving, and coordinating force in the environment.

--- the teacher is sensitive -- to the need and the time for intervening; intervening at the wrong time can be interference.

--- the teacher is an evaluator of a child -- as a result of observation of the child. Valid observations do not require objective measures. The best measure of a child's work is his work.

--- the teacher is a creator of curriculum -- based on what the children "want to know" and by responding to the initiatives and the directions taken by children.

--- the teacher is a keeper of records -- of individual successes of children as they function with language, perceptions, concepts, thinking and living.

And, finally, a teacher truly knows and understands children and is familiar

with the real world of children -- all children. He is, after all, everything one would want a child to be and more!

CONCLUSION

With the problem and the challenge stated; with the recent evidence accumulated as to the needs and learning styles of young children; and with a proposal for an invitational, responsive environment for children and teachers, it appears appropriate to conclude with a listing of several of the behavioral changes that can be expected to occur in children and teachers in such an environment.

A child can be expected to:

--- move freely and with ease and responsibility from activity to activity.

--- be free to experience the world around him in his own way.

--- direct his own activity and to work with materials and people in a way which he feels best fulfills his needs.

--- measure his own success by drawing upon his knowledge and making use of skills already learned when the need arises.

--- experience freedom to the extent that it does not interfere with the freedoms and the rights of others.

--- respect the environment and the materials in that environment.

--- develop a more positive feeling about himself and his abilities.

--- acquire realistic insights in relating "school" to home and to his culture.

--- learn in a variety of ways and in a way that may be unique to him.

--- learn from other children and while helping other children.

--- have options open to him and to make decisions wisely.

--- acquire those basic skills necessary for a creative existence.

--- appreciate the value of "work" and the joy of commitment.

--- develop positive attitudes about school and learning and life.

--- be, above all, a child and make mistakes and make errors in judgment and to know that these too can be an essence of growth.

A teacher can be expected to:

--- observe a child and children from the vantage point of new insights, respect and skills.

--- acquire new meaning and direction and dimension in his role as "teacher".

--- measure his successes by those of the children with whom he is working.

--- develop a more positive feeling about himself and his abilities.

--- experience the joy of working with individual children while meeting the needs of the total group.

--- lead the child to learning and withdraw while he (the child) sets about the task of learning.

--- be exhausted but fulfilled at the end of a day that is never dull and never routine but one that is filled with the exhilaration of accomplishment and the knowledge that "there is another way".

A BEGINNING . . . . . .

HARTFORD'S FOLLOW-THROUGH

In May 1968, the Hartford Board of Education and the Superintendent of Schools, Medill Bair, made a decision that was to lead to several, subsequent commitments that have since engendered waves of "hope and expectancy" in its community of children, parents and teachers.

Aware of the problems and challenges abroad in a city with the largest school population in the State of Connecticut, that body committed itself to one segment of its "grand design" for change -- Hartford '74! The extent of this initial commitment was to establish a model early childhood learning center that would incorporate:

--- the insights of what was learned from the program for four-year olds - Head Start.

--- the knowledge that learning problems in children might be prevented with a program of intervention during the pre-school years.

--- the results of the newly emerging research on "how children learn".

--- those proven and newly rediscovered elements inherent in the Montessori approach to young children.

--- the realization that the parents of "inner-city" children do care enough to demand "quality programs" for their children and that their involvement in those programs is essential to their success.

This model center opened its doors at the Rawson School in September 1968 for 50 children in a mixed-age grouping of 4 and 5 year olds. A program was designed based essentially on the elements set down on the preceding pages. What emerged was an environment that can truly be called "invitational and responsive". The efforts of a dedicated staff, under the leadership of Miss Joan Gelormino, the cooperation of the administrative unit and the resources of the schools of education from the University of Hartford and the University of Connecticut combined to dramatically demonstrate that "there is another way".

State and local funds were provided in January 1969 to establish this center as a training model in the hope of translating that which was positive into 5 average and traditional kindergartens in the city. Five teachers and five paraprofessionals received a three-week inservice program at the model center. At the end of that period and with a duplication of materials from the model for each of the five classrooms and a full-time resource teacher to service the five teachers -- an "invitational program" was in operation for 250 more children.

The Board of Education committed itself in its budget for 1969-70 to duplicate this procedure for the 60 remaining kindergartens and 10 first grades during the current school year. At this writing and as a result of subsequent inservice workshops for teachers and paraprofessionals, a total approximating 3,000 Hartford children have received the invitation!

Included in the budget for the 1970-71 school year are funds committed to similar workshops, materials and paraprofessionals for 120 first grades and 10 second grades. This decision will "invite" an additional 4,000 youngsters to participate in "another way".

Looking to the future, the implications are unlimited. Hopefully, what may emerge will be:

--- a non-graded, multi-aged, and individualized program for all 4, 5, 6 and 7 year old children in the city by 1972.

--- the end of the "report card" as it is now known, to be replaced by periodic child-parent-teacher evaluations of success and accomplishments.

--- a moratorium on the present use of group objective tests of measurement and achievement until there are new devices and more reliable norms which are based on valid and relevant expectancies for children.

--- the development of a similar program for 3 year-old children as the result of a Model Cities pilot project.

--- the incorporation of day care centers and facilities as part of the total "invitational" component.

--- the creation of a total community effort guided by the enlightened notion that schools exist for children and that children are the future of that community.

..... A BEGINNING!

ACKNOWLEDGMENT

To those Hartford teachers and paraprofessionals who, in December 1968, accepted the challenge and made a commitment which "invited" the original 250 youngsters to search for "another way", acknowledgment is gratefully given:

Mrs. N. Verginia Atwood
Mrs. Rochelle Berliner
Mrs. Barbara Camp
Mr. Anthony Calabro
Mrs. Mary Campbell
Mrs. Ruth Dickey
Mrs. Joan Jarosz
Mrs. Carol Kuszik
Miss Jan Monsam
Mrs. Ellen Roth
Miss Ann Gail Singer
Mrs. Laura Smith

BIBLIOGRAPHY

1. Ashton-Warner, Sylvia; "Spinster"- Simon & Schuster, New York, New York

2. Ashton-Warner, Sylvia; "Teacher" - Simon & Schuster, New York, New York

3. Bloom, B., Davis, A., & Hess (Eds.) "Compensatory Education for Cultural Deprivation". New York: Holt, Rinehart, & Winston, 1965.

4. Bloom, Benjamin S. : "Stability and Change in Human Characteristics" - John Wiley & Sons, Inc., 1964

5. Bruner, Jerome S. - "The Process of Education" - Cambridge, Mass: Harvard University Press, 1960

6. Bruner, Jerome S. - "On Knowing": "Essays for the Left Hand" - Cambridge, Mass: Belknap Press of Harvard University, 1963

7. Bruner, Jerome S.: Olver, R.R.: Greenfield, P.M. Et Al. "Studies in Cognitive Growth. New York: John Wiley & Sons, 1966

8. Bruner, J. S.: - "Toward a Theory of Instruction". Belknap Press, 1961

9. Cheyney, Arnold B. - "Teaching the Culturally Disadvantaged" - Charles E. Merrill Books, Inc., 1967

10. Flavell, John H. - "The Developmental Psychology of Jean Pieget" Princeton, N. J.: D. Van Nostrand Company, 1963

11. Frostig, Marianne: "Program for the Development of Visual Perception" - Follett Publishing Company, 1964

12. Glasser, William: "Schools Without Failure" - Harper & Row, 1969

13. Hebb, D.O. : "The Organization of Behavior" - John Wiley & Sons, 1949

14. Holt, John: "How Children Fail" - New York: Pitman Publishing Co., 1966

15. Holt, John: "How Children Learn" - New York: Pitman Publishing Co., 1967

16. Hunt, J. McV.: "Intelligence and Experience" - The Ronald Press Co., 1961

17. Jackson, Philip W. : "Life in Classrooms" - Holt, Rinehart and Winston, Inc., 1968

18. Kephart, Newell C.: "The Slow Learner in the Classroom" - Charles E. Merrill Books, Inc., 1966

19. Kephart, Newell: "The Purdue Perceptual-Motor Survey, 1966" - Charles E. Merrill Books, Inc.

BIBLIOGRAPHY

20. Mager, Robert F. : "Preparing Instructional Objectives" Fearon Publishers, 1962

21. McLuhan, Marshall: "Understanding Media" - Signet Books, 1964

22. McLuhan, Marshall: "The Medium is the Message" - Signet Books, 1961

23. Mead, Margaret & Wolfenstein, Martha (Eds.) "Childhood In Contemporary Cultures," Chicago, Illinois; University of Chicago Press, 1955

24. Montessori, Maria: "The Discovery of the Child" - The Theosophical Press, 1929

25. Montessori, Maria: "The Montessori Method" - Frederick A. Stokes Co., 1909

26. Montessori, Maria: "Dr. Montessori's Own Handbook" - Schocken Paper, 1965

27. Nimnicht, Glen: "The New Nursery School" - General Learning Corp., 1969

28. Peter, Laurence J. : "Prescription Teaching" - McGraw Hill, 1965

29. Piaget, Jean: "The Origins of Intelligence in Children" - International Press, Inc., 1952

30. Piaget, Jean and Inhelder, Barbel. "The Growth of Logical Thinking From Childhood to Adolescence." - New York Basic Books, 1958

31. Pines, Maya. "Revolution in Learning" - Harper & Row, 1966

32. Pribram, K. H. "A Review of Theory in Physiological Psychology" - Annual Review Psychology, 1960

33. Rambusch, Nancy McCormick. "Learning How to Learn" - Helicon Press, 1120 N. Calvert Street, Baltimore, Maryland, 1962

34. Riessman, Frank. "The Culturally Deprived Child" - New York: Harper and Row, 1962

35. Valett, Robert E. : "Programming Learning Disabilities". Fearon Publishers, 1969

36. Vygotsky, L. S.: "Thought and Language" - John Wiley & Son, Inc., 1962